MICHIGAN STATE UNIVERSITY Project Plan Presentation Backstage's Back Alright The Capstone Experience

Team Kohl's

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From Students... ...to Professionals

Project Sponsor Overview

- Kohl's is one of the largest department store chains in America
- Over 30% of Kohl's sales are from online sales, tallying up to roughly \$1 billion quarterly
- Online sales are made from webpage and mobile apps





Project Functional Specifications

- Developers often struggle with the deployment, development, maintenance and testing of software. A new way of managing these issues is with developer portals.
- Companies like Kohl's run and maintain a large amount of custom software, by using developer portals, developers can easily deploy complex software and projects. Kohl's has developed their own developer portal called "Ensemble".
- The two major parts of this project are solving an underlying inefficiency in the current Ensemble platform and extending the functionality.
- The Ensemble platform is functionally broken into two separate applications on different platforms, by merging these two applications together, we intend to save a lot of time for developers to deploy software.

Project Design Specifications

- Create App Page
 - User will populate a template that will create a project, a documentation page, or a Spring Boot app
- App Directory Page
 - Displays a catalog of the developer's current applications and their details

Screen Mockup: Create App Page

Search Home		ew Component					
App Directory	Available Te	nplates					
Create App Docs	Q Search	× Other Templates					
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Tech Radar	* Starred	Project Creation	Documentation	Springboot Application			
	KOHLS	DESCRIPTION	DESCRIPTION	DESCRIPTION			
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		OWNER	OWNER	OWNER			
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The Capstone Experience

Screen Mockup: Product Creation Page

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Screen Mockup: Task Activity Page

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Create product 0 seconds		1.0
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Screen Mockup: App Directory Page

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	PROCESSING STATUS								

Project Technical Specifications

- Ensemble web application
 - Backend
 - Uses both Backstage and Spring Boot
 - Frontend
 - **OUses React**
 - Run with Node.js and Yarn
- GitLab
 - Employs both Dynatrace and OpenShift



Project System Architecture



Project System Components

- Hardware Platforms
 - None
- Software Platforms / Technologies
 - React
 - TypeScript
 - Node.js
 - Yarn
 - Visual Studio Code
 - Backstage
 - GitLab
 - Dynatrace
 - OpenShift

Project Risks

- Risk 1 Local Testing
 - Description Testing code without access to Kohl's internal network
 - Mitigation Work closely with the Kohl's engineers to develop methods for local testing
- Risk 2 Security
 - Description Each API used must be secured with authentication
 - Mitigation Research how to utilize libraries in the Ensemble backend to limit access for particular users and add encryption to all sensitive data
- Risk 3 Dynatrace Dashboard Connection
 - Description Building the connection between the Ensemble dashboard and Dynatrace dashboard
 - Mitigation Research the process behind linking Dynatrace to Backstage, and discuss non-trivial modifications Kohl's team previously made to get the connection working correctly

Questions?

